



## EVALUATION OF THE RESULTS OF THE TREATMENT OF NON-SPECIFIC ULCERATIVE COLITIS WITH THE APPLICATION OF PLASMAPHERESIS

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**Abstract:** Improving the results of treatment of steroid-dependent and steroid-resistant forms of ulcerative colitis.

The study is based on the results of treatment of 105 patients with nonspecific ulcerative colitis with hormone-resistant and hormone-dependent forms, admitted to the surgical departments of the multidisciplinary clinic of Samarkand State Medical University in the period from 2012 to 2021.

**Key words:** ulcerative colitis, hormonal resistance, hormonal dependence, plasmapheresis .

**Introduction:** According to epidemiologic studies, the incidence of nonspecific ulcerative colitis (UC) is currently increasing worldwide. According to the severity of the course, complications and mortality rate, NYK takes one of the leading places in the composition of gastrointestinal tract diseases (G.A. Grigorieva, N.Yu. Meshalkina, 2017; I.L. Khalif, I.D. Loranskaya, 2019. ). The chronic recurrence of NCD, the development of life-threatening complications, the main damage of people of working age, insufficiently effective and often expensive treatment determine the urgency of this problem (E.A. Belousova, 2019; F.I. Komarov, 2018). ). The purpose of the study. Improving the outcome of treatment of steroid-dependent and steroid-resistant forms of ulcerative colitis.

**Materials and research methods.** The main group consisted of 47 patients, the control group consisted of 58 patients. The main and control groups of patients did not differ significantly in terms of sex, age, ratio of hormone-resistant and/or hormone-dependent forms of YK, time of emergence of hormone dependence and/or hormone resistance (Table 1).

In addition to the course of plasmapheresis with indirect electrochemical oxygenation with additional ozonation (PF with BEKO+ O<sub>3</sub>), the main group of patients received 5-ASA drugs in a dose of 2-4 g, depending on the severity and distribution of CKD. about the inflammatory process. Taking into account hormonal dependence and / or resistance, patients in severe cases of the disease are additionally prescribed azathioprine at a dose of 1.5 mg per 1 kg of body weight per day.

Table 1

Characteristics of patients according to localization and severity of inflammatory process in the main and control groups

Research done options	Main group n=47	Control group n=58
Location		
Pancolitis	11 (23%)	13 (22,5%)
Damage to the left side	15 (32%)	18 (31%)
Proctosigmoiditis	17 (36%)	21 (36%)
Proctitis	4 (9%)	6 (10,5%)
YK weight loss		
Heavy	13 (27,5%)	16 (27,5%)
Medium heavy	29 (62%)	33 (57%)
Light	5 (10,5%)	9 (15,5%)

Patients in the control group were prescribed 1-2 mg of prednisolone per kilogram of body weight, but not more than 100 mg, depending on the severity and distribution of the inflammatory process in the large intestine. Like the patients in the main group, they received 2-4 g of 5-ASA per day. In contrast to the main group, azathioprine was administered to all patients in the control group. The dose of the drug, 1.5-2.5 mg per 1 kg of body weight, depends on the weight of YK.

The criteria for the effectiveness of the treatment were as follows: reduction or elimination of resistance to the main therapy, reduction or cancellation of the dose of steroids, achievement of stable clinical and endoscopic remission, reduction of the frequency and severity of relapses, regression of systemic manifestations, reduction of the disease. percentage of surgical interventions.

Research results and discussion. In order to justify the feasibility of introducing PF with BEKO+ O3 in the treatment of patients with steroid-dependent and steroid-resistant forms of YK, the clinical course of the disease, laboratory parameters and endoscopic picture were studied and compared with the control group when using efferent cell technologies.

Clinical evaluation criteria. After admission, all patients in the main and control groups complained of frequent loose stool, blood in the stool, tenesmus, abdominal pain, the intensity of which depends on the activity and spread of the inflammatory process, the severity of the disease was liq. Fever from

subfebrile to febrile was observed in 29 (62%) patients in the main group and in 37 (64%) patients in the control group with severe and moderate YK.

After 2 PF courses with BEKO+ O3, clinical remission was achieved on day 8 in 38 of 47 patients (81%) in the main group, of which: 4 of 5 patients (9%) with mild pain. course of the disease, 27 of 29 patients (57%) with moderate and 7 of 13 patients with severe YK (15%); By the end of the course of PF with BEKO+ O3, on day 20, in 45 of 47 patients (96%), of which 11 (23%) were in 13 patients with severe colitis. In the control group, on the 8th day of treatment, clinical remission was achieved in 31 of 58 patients (53%), of which: in 7 of 9 patients (12%), in 23 (40%) with a mild course of the process. ) in 33 patients with moderate course and 1 of 16 patients with severe YK (2%); On the 20th day - in 45 of 58 patients (78%), of which: in 29 of 33 patients (50%) with a moderate course of inflammation and in 7 of 16 patients with a severe course (12%) YK.

Leukocytosis (more than  $9 \times 10^9/l$ ) was noted in all patients with moderate and severe CKD, a mild form of the process, and the level of leukocytes was within the normal range. On average, this indicator is  $6.64 \pm 0.61 \times 10^9/l$  in patients of the main group in the mild form of NYK, in patients of the control group -  $5.56 \pm 0.76 \times 10^9/l$ ; in patients in the main group with an average form -  $12.22 \pm 1.84 \times 10^9/l$ , in patients in the control group -  $11.87 \pm 0.87 \times 10^9/l$ ; in severe form in patients in the main group -  $20.08 \pm 1.85 \times 10^9/l$ , in patients in the control group -  $19.47 \pm 0.94 \times 10^9/l$ .

After the course of PF with BEKO+ O3, on the 20th day of treatment, in the patients of the main group, this indicator was  $5.34 \pm 0.31 \times 10^9/l$  for mild YK,  $5.89 \pm 0.61 \times 10^9$  for moderate YK /l, in the severe course -  $6.09 \pm 0.81 \times 10^9/l$ , but an increase in the number of leukocytes was found on the 2nd and 8th days of treatment, corresponding to the condition after the 1st and 2nd course of PF with BEKO+ O3. a natural response to ongoing therapy, followed by a decrease in indicators to normal values. This was especially noticeable in the mild and moderate course of the inflammatory process against the background of a low leukocyte level.

In the control group, a less pronounced decrease in leukocytes was observed in the respective treatment periods in mild and moderate forms of YK, reaching the norm by the end of treatment: in mild form -  $5.56 \pm 0.32 \times 10^9 / l$ , in moderate form -  $6.2 \pm 0.75 \times 10^9/l$ . The level of leukocytes increased to  $11.59 \pm 0.51 \times 10^9/l$  in severe CKD ( $p < 0.05$ ).

After hospitalization, the erythrocyte sedimentation rate (EChT) in patients in the main and control groups increased according to the weight of the YK. In the main group, EChT during admission was  $7.64 \pm 2.13$  mm / h with a slight increase in CK,  $19.43 \pm 7.42$  mm / h during the average course of the process and  $42.36 \pm 10.13$  mm / h with severe flow. It was an hour. In the control group, ECT was  $6.98 \pm 2.38$  mm/h with a mild course,  $20.12 \pm 8.03$  mm/h with an average course, and  $41.96 \pm 9.36$  mm/h with a severe course of the disease. organized the hour.

In the main group, after the course of PF with BEKO+ O3 on the 20th day of treatment, this indicator was  $5.38 \pm 0.32$  mm/h in mild CK,  $6.89 \pm 1.17$  mm/h in moderate course and  $7.64 \pm$  It was 2.69 mm/h. h in severe cases. In the control group, the level of EC at the same time was  $5.56 \pm 0.41$  mm/h in a mild course,  $12.56 \pm 3.37$  mm/h in an average course, and  $19.06 \pm 3.37$  mm/h in a severe course. It was an hour.

In addition, there was a significant difference in the level of this indicator in the main and control groups of patients in moderate and severe YK.

According to the severity of the YK course, high levels of C-reactive protein were observed in patients of both groups. In the average main group, this indicator was  $4.17 \pm 1.32$  mg/l in the mild form,  $10.34 \pm 3.16$  mg/l in the average course, and  $46.48 \pm 13.67$  ml/l in the severe form. made 1. In the control group, the level of C-reactive protein was  $4.09 \pm 1.28$  mg/l during the mild course,  $10.71 \pm 2.98$  mg/l during the average course, and  $44.98 \pm 11.12$  mg/l during the severe course. organized the

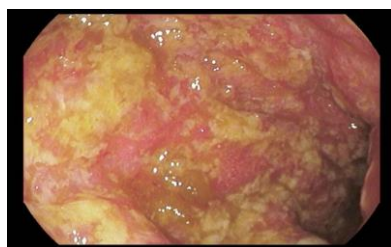
A statistically significant decrease in the level of C-reactive protein and reaching normal numbers was noted in the main group of patients by the end of the course of PF with BEKO+ O<sub>3</sub>, up to the 20th day of treatment; with mild NYK -  $2.03 \pm 0.62$  mg/l, moderate -  $2.43 \pm 1.04$  mg/l, severe -  $3.41 \pm 1.3$  mg/l. In the control group, a statistically significant decrease of this indicator was observed, but it did not reach the values corresponding to the norm in moderate and severe CK. Thus, on the 20th day of treatment, the C-reactive protein level was  $2.07 \pm 0.58$  mg/l in mild CKD,  $6.73 \pm 2.61$  mg/l in moderate CKD, and 19.85 mg/l in severe CKD. was  $\pm 3.72$  mg/ l.

Results of endoscopic research methods. At admission, 5 of 47 patients (10.5%) in the main group and 9 of 58 patients (15.5%) in the control group had minimal inflammatory activity. In 29 out of 47 patients in the main group (62%) and in 33 out of 58 patients in the control group (57%), moderate activity of the inflammatory process was detected. In 13 of 47 patients (27.5%) in the main group and in 16 of 58 patients (27.5%) in the control group, the maximum activity of the inflammatory process was determined.

After PF treatment with BEKO+ O<sub>3</sub>, on the 20th day of follow-up, in the main group, endoscopic examination showed significant positive dynamics: hyperemia and swelling of the colonic mucosa decreased in all patients, and a vascular pattern appeared. , granularity of the mucosa. decreased, spontaneous bleeding, there are signs of active epithelization (Fig. 1-3)

Fig. 1-3)

**1-Pic. Active passage of yk.**



DATE: 05/Nov/2018 14:21:52 Doctor: Dr  
ID: endoscopy NAME: kurepta Age: AGE Sex: S  
COMMENT: COMMENT  
Image Processing Parameter: E=4 SE=OFF GE=OFF TE=OFF NR=Low  
Brightness=0, AUTO, AVE R=0 B=0 Shutter mode=ON

**2-Pic Day 12 after PF with BEKO+O<sub>3</sub>**



DATE: 17/Nov/2018 14:20:17 Doctor: Dr  
ID: endoscopy NAME: kurepta Age: AGE Sex: S  
COMMENT: COMMENT  
Image Processing Parameter: E=4 SE=OFF GE=OFF TE=OFF NR=Low  
Brightness=0, AUTO, AVE R=0 B=0 Shutter mode=OFF

**3-Pic. Day 20 after PF with BEKO+O<sub>3</sub>**



DATE: 17/Nov/2018 14:20:57 Doctor: Dr  
ID: endoscopy NAME: kurepta Age: AGE Sex: S  
COMMENT: COMMENT  
Image Processing Parameter: E=4 SE=OFF GE=OFF TE=OFF NR=Low  
Brightness=0, AUTO, AVE R=0 B=0 Shutter mode=OFF

At the end of treatment in 47 patients of the main group, in all 5 (11%) patients with minimal disease activity and in 25 (53%) of 29 patients with moderate YK activity, a total of 30 (64) patients underwent endoscopic remission has been achieved. %) patients. Improvement of the endoscopic image was noted in 4 (8%) of 29 patients with moderate disease and in all 13 (28%) patients with active inflammation. Endoscopic mucosal changes in these patients corresponded to minimal disease activity.

After a PF course with BEKO+ O3, 17 (36%) patients who did not achieve complete clinical and endoscopic remission had to be prescribed prednisolone at a dose of 20-30 mg per day, which was 2-3 times less. The average dose of the drug prescribed to the control group of patients with a similar NYK course under these conditions.

Such a course of treatment made it possible to achieve complete remission with gradual withdrawal of steroids within 1-2 months. By the end of the PF course with BEKO+ O3, patients were switched to a maintenance dose of 5-ASA preparations of 1-2 g per day. Patients with severe CK continued to receive a maintenance dose of 1.5 mg/kg/day of azathioprine for six months.

During the entire period of treatment, most patients felt satisfied, PF with BEKO+ O3 was easily tolerated. Adverse effects were evaluated in patients not receiving azathioprine and were observed in 9 of 34 patients (26%): nausea and dizziness in 5 (14.5%) patients and a slight decrease in blood pressure in 4 (11.5%) patients. In the conservatively treated control group, a less pronounced positive trend was observed during the 4th session of PF with BEKO+ O3.

Endoscopic remission in the control group of patients, in contrast to the main one, was achieved in 22 of 58 patients (38%): in all 9 (15.5%) patients with minimal YK activity and only in 13 of 33 patients (22.5%). average activity of the process. The remaining 20 of 33 patients with moderate disease activity (34.5%) were diagnosed with minimal severity of the inflammatory process. In 16 (27.5%) patients with severe YK activity, more negative results of conservative treatment were noted: in 3 (5%) patients, the endoscopic picture corresponded to the minimum level of inflammatory activity, 9 (15.5%) in patients - on average. YK activity, 4 (7%) patients did not respond to treatment at all. They underwent a total colectomy.

Unlike patients in the main group, patients in the control group received high doses of prednisolone during these periods, an average of 0.75-1 mg / kg body weight per day, mesalazine 3-4 g per day, azathioprine 1.5-2.5 they continued. mg/kg per day.

Adverse events were observed more frequently in patients in the control group than in patients treated with PF with BEKO+ O3. Thus, leukopenia in 3 (5%) patients, dyspepsia in 43 (74%) patients, headache in 32 (55%) patients, arterial hypertension in 13 (22%) patients, skin rash in 6 patients ( 10% of patients, Exacerbation of chronic pancreatitis was observed in 2 (3%) patients.

In the overall evaluation of treatment results, we considered clinical and endoscopic remission as complete response, clinical remission with only endoscopic signs of disease activity as incomplete response, improvement of clinical and endoscopic appearance of YK as partial response, and YK as lack of response. there is no improvement in the clinical and endoscopic course.



Thus, in the main group of patients with BEKO+ O3 on the background of PF, we obtained a complete response in 30 (64%) of 47 patients, an incomplete response in 15 (32%) patients, and a partial response in 2 (4%) patients.

Patients in the control group had significantly worse treatment outcomes during these periods than patients in the main group. We obtained a complete response to corticosteroids and cytostatic therapy in 22 (38%) of 58 patients, incomplete - 23 (39.5%) patients, partial - 9 (15.5%) patients, no response - 4 (7%). patients.

Summary. In patients with steroid-dependent and steroid-resistant forms of ulcerative colitis, the positive dynamics of general clinical, laboratory parameters and endoscopic picture show the effectiveness of its stopping when using plasmapheresis course with indirect electrochemical detoxification of blood plasma for their treatment with additional ozonation. shows. exacerbation of the disease.

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